--Regulation switch 70 as shown in Fig. 3 includes a comparator 40, a first transistor 42 (e.g., p-channel metal oxide semiconductor), a first switch 44, and a second switch 46. Comparator 40 receives a feedback voltage, F_2, and compares it to a reference voltage, R_1, when enabled by a fourth enable signal, E_4. Feedback voltage F_2, connects a transistor source 45 to comparator 40. If F_2 is less than R_1, comparator 40 regulates a gate 43 of first transistor 42.--

IN THE CLAIMS:

Please cancel claims 4, 14 and 21 to 25 without prejudice or disclaimer of subject matter.

Please amend claims 1, 3, 5 to 11, 13, and 15 to 20 as follows:

-- 1. (Amended) A method of providing multiple voltage outputs, comprising:

receiving an input signal from a multifunctional pump configured to provide more than two voltages;

sending a first output signal based on the input signal using a first switch;

sending the input signal to a transistor;

sending a second output signal received from the transistor via a second switch; and

comparing a reference voltage and a feedback voltage using a first comparator to provide a comparator result, the first comparator being coupled to a gate of the transistor to control the transistor based on the comparator result.

3. (Amended) The method of claim 2, wherein the first output signal has a voltage of 7 volts and a voltage of 5 volts and the second output signal is 5 volts.

5. (Amended) The method of claim 1, wherein the multifunctional pump is a circuit comprises:

a first array receiving input from a first clock driver;

a second array receiving input from a second clock driver, the second clock driver and the second array being in parallel to the first array and the first clock driver;

a third array receiving input from a third clock driver, the third clock driver and the third array being in parallel to the second array and the second clock driver;

a fourth array receiving input from a fourth clock driver, the fourth clock driver and the fourth array being in parallel to the third array and the third clock driver; and

a fifth array receiving input from a fifth clock driver, the fifth clock driver and the fifth array being in parallel to the fourth array and the fourth clock driver;

wherein each array is a circuit array configured to form a voltage pump.

6. (Amended) The method of claim 5, wherein the multifunctional pump further comprises:

an oscillator providing a clock signal to each of the clock drivers; and

a second comparator providing input to the oscillator, the second comparator comparing the output from the arrays with a predetermined voltage.

7. (Amended) The method of claim 6, further comprising:

placing the multifunctional pump in a standby mode when the first clock driver is enabled by a first signal.

8. (Amended) The method of claim 6, further comprising:

placing the multifunctional pump in a read mode when the second clock driver is enabled by a second signal and the first array is on.

9. (Amended) The method of claim 6, further comprising:

placing the multifunctional pump in a program mode when the third clock driver, the fourth clock driver, and the fifth clock driver are enabled by a third signal and the first array and the second array are on.

10. (Amended) The method of claim 6, further comprising:

placing the multifunctional pump in an erase mode when the third clock driver, the fourth clock driver, and the fifth clock driver are enabled by a third signal and the first array and the second array are on.

11. (Amended) An apparatus for providing multiple voltages, comprising:

a multifunctional pump configured to provide more than two voltages;

a first switch receiving input from the multifunctional pump and providing a first output signal;

a transistor receiving input from the multifunctional pump;

a first comparator coupled to a gate of the transistor to control the transistor based on a comparator result, the first comparator comparing a reference voltage and a feedback voltage to provide the comparator result; and

a second switch, coupled to the transistor, providing a second output signal.

13. (Amended) The apparatus of claim 12, wherein the first output signal has a voltage of 7 volts and a voltage of 5 volts and the second output signal is 5 volts.

15. (Amended) The apparatus of claim 11, wherein the multifunctional pump comprises:

a first array receiving input from a first clock driver;

a second array receiving input from a second clock driver, the second clock driver and the second array being in parallel to the first array and the first clock driver;

a third array receiving input from a third clock driver, the third clock driver and the third array being in parallel to the second array and the second clock driver;

a fourth array receiving input from a fourth clock driver, the fourth clock driver and the fourth array being in parallel to the third array and the third clock driver; and

a fifth array receiving input from a fifth clock driver, the fifth clock driver and the fifth array being in parallel to the fourth array and the fourth clock driver;

wherein each array is a circuit array configured to form a voltage pump.

16. (Amended) The apparatus of claim 15, wherein the multifunctional pump further comprises:

an oscillator providing a clock signal to each of the clock drivers; and

a second comparator providing input to the oscillator, the second comparator comparing the output from the arrays with a predetermined voltage.

17. (Amended) The apparatus of claim 16, wherein the multifunctional pump is in standby mode when the first clock driver is enabled by a first signal.

18. (Amended) The apparatus of claim 16, wherein the multifunctional pump is in read mode when the second clock driver is enabled by a second signal and the first array is on.

19. (Amended) The apparatus of claim 16, wherein the multifunctional pump is in a program mode when the third clock driver, the fourth clock driver, and the fifth clock driver are enabled by a third signal and the first array and the second array are on.

20. (Amended) The apparatus of claim 16, wherein the multifunctional pump is in an erase mode when the third clock driver, the fourth clock driver, and the fifth clock driver are enabled by a third signal and the first array and the second array are on.--